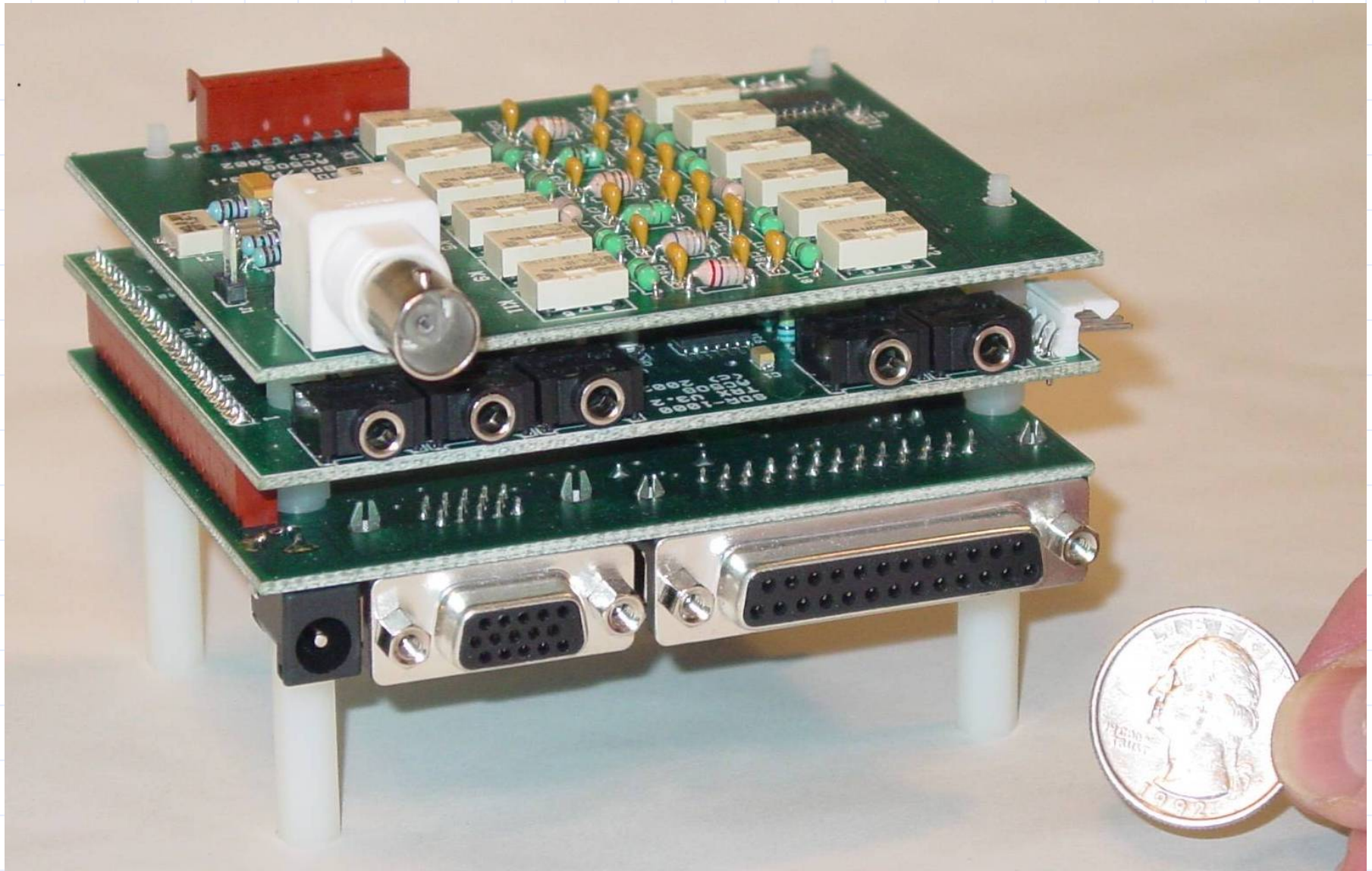


Software Defined Radios The Future Is Now...

By Gerald Youngblood, AC50G
Bob McGwier, N4HY

Original SDR-1000



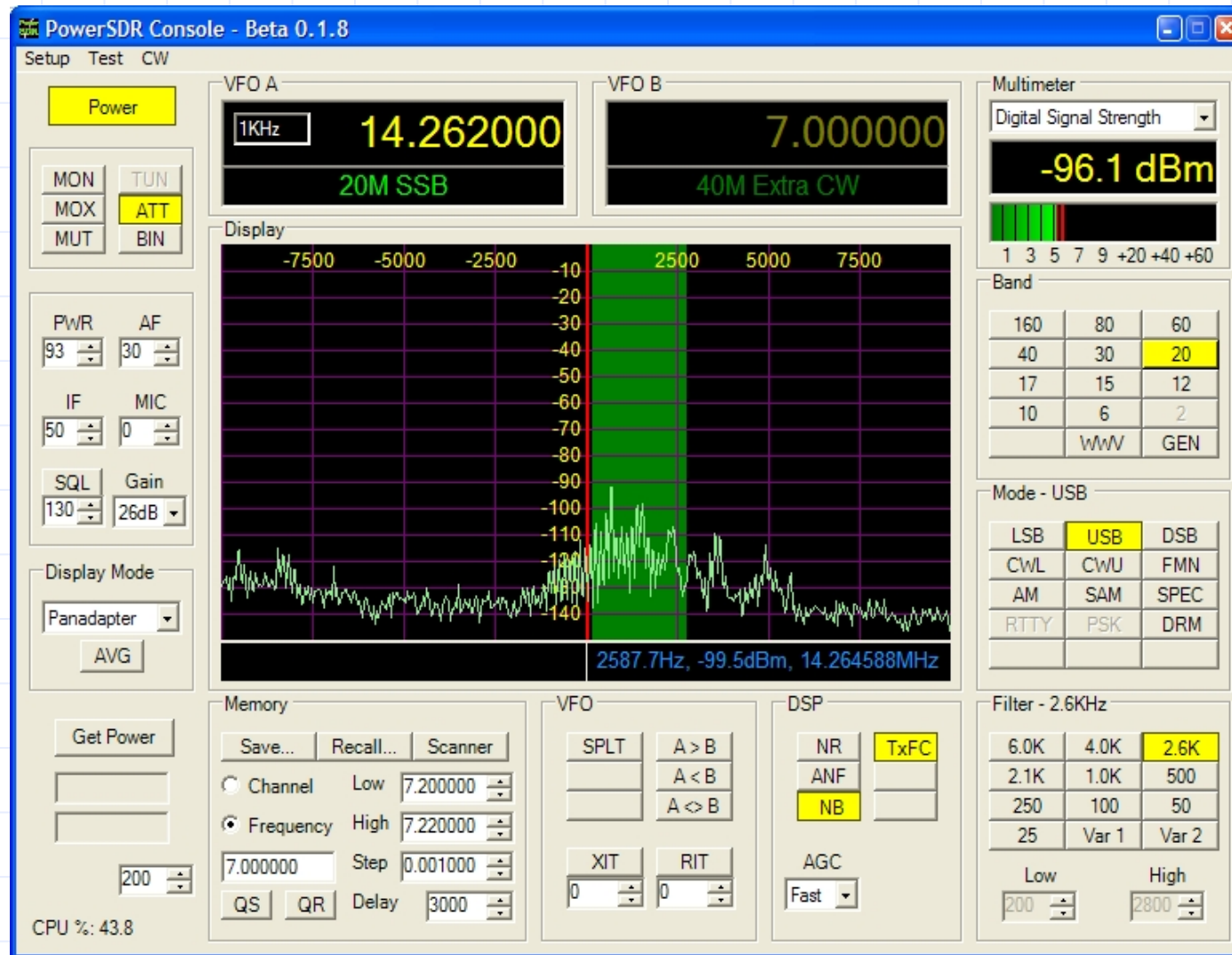
New Since Last Year

- ◆ Enclosure With Expansion Options
- ◆ RFE Board – Enhanced Dynamic Range
- ◆ 2M Microwave IF Support
- ◆ New C#.NET and Linux Versions
- ◆ 100W Internal PA
- ◆ 10MHz External Clock Reference
- ◆ Many Open Source Contributions

SDR-1000 Specifications

- ◆ 11KHz – 65MHz General Coverage
- ◆ 160M – 6M TX (2M XVTR IF Opt)
- ◆ IMD DR3 – >90dB (14.2MHz @ 5KHz)
- ◆ -141dBm MDS (14.2MHz, 500Hz)
- ◆ Brick Wall Filters (1.05:1 Shape Factor)
- ◆ 100W on HF

PowerSDR Software



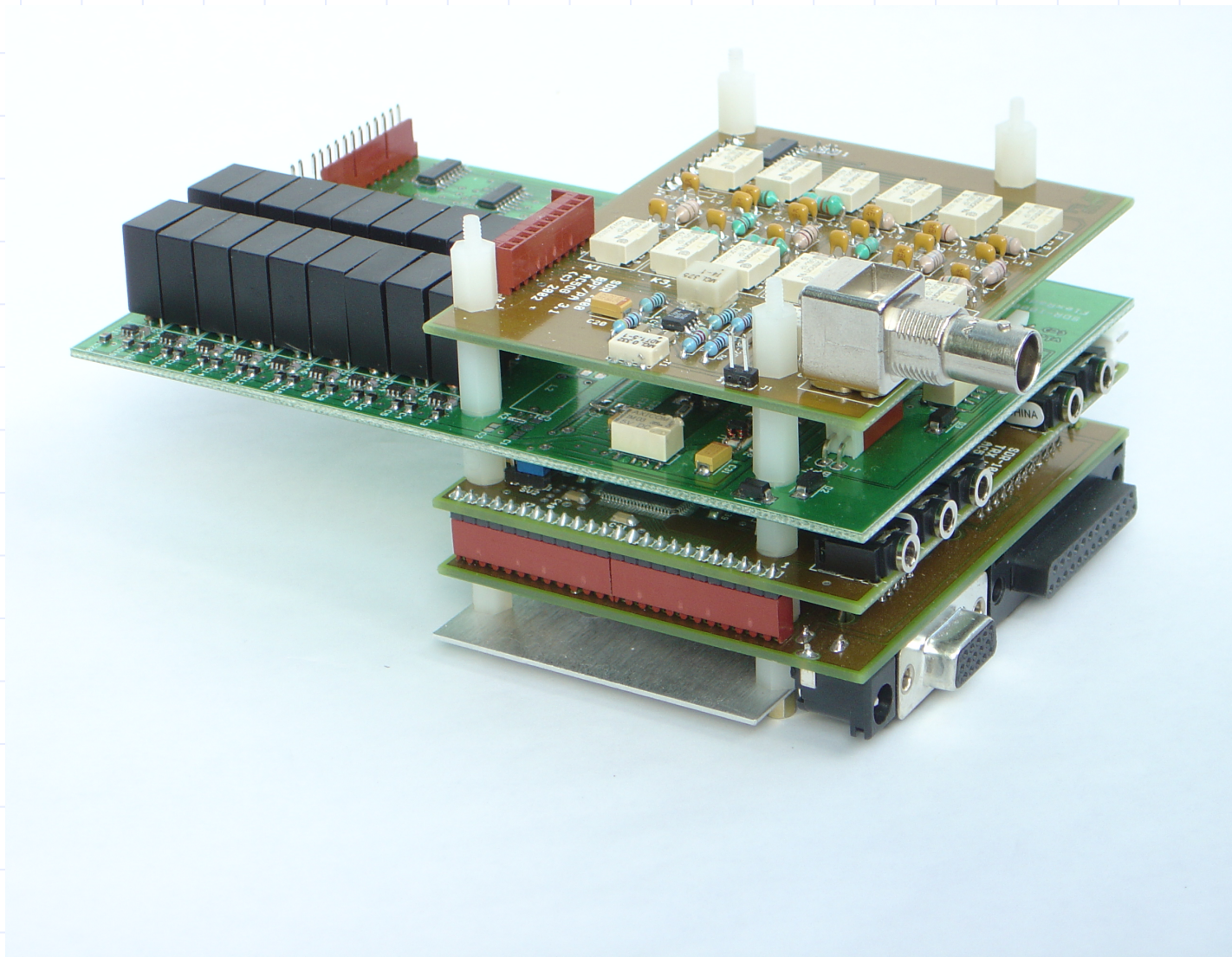
New PowerSDR Software

- ◆ Joint Development: N4HY, AB2KT, FlexRadio
- ◆ C#.NET and Linux Versions
- ◆ Full Multithreading – Low CPU Loading
- ◆ 24-bit, 196KHz ASIO (Also DirectX, MME)
- ◆ Hi Res Panadapter, Scope, & Phase Display
- ◆ SDRROM Impulse Noise Removal
- ◆ Affine Projection Algorithm NR

SDR-1000 Enclosure



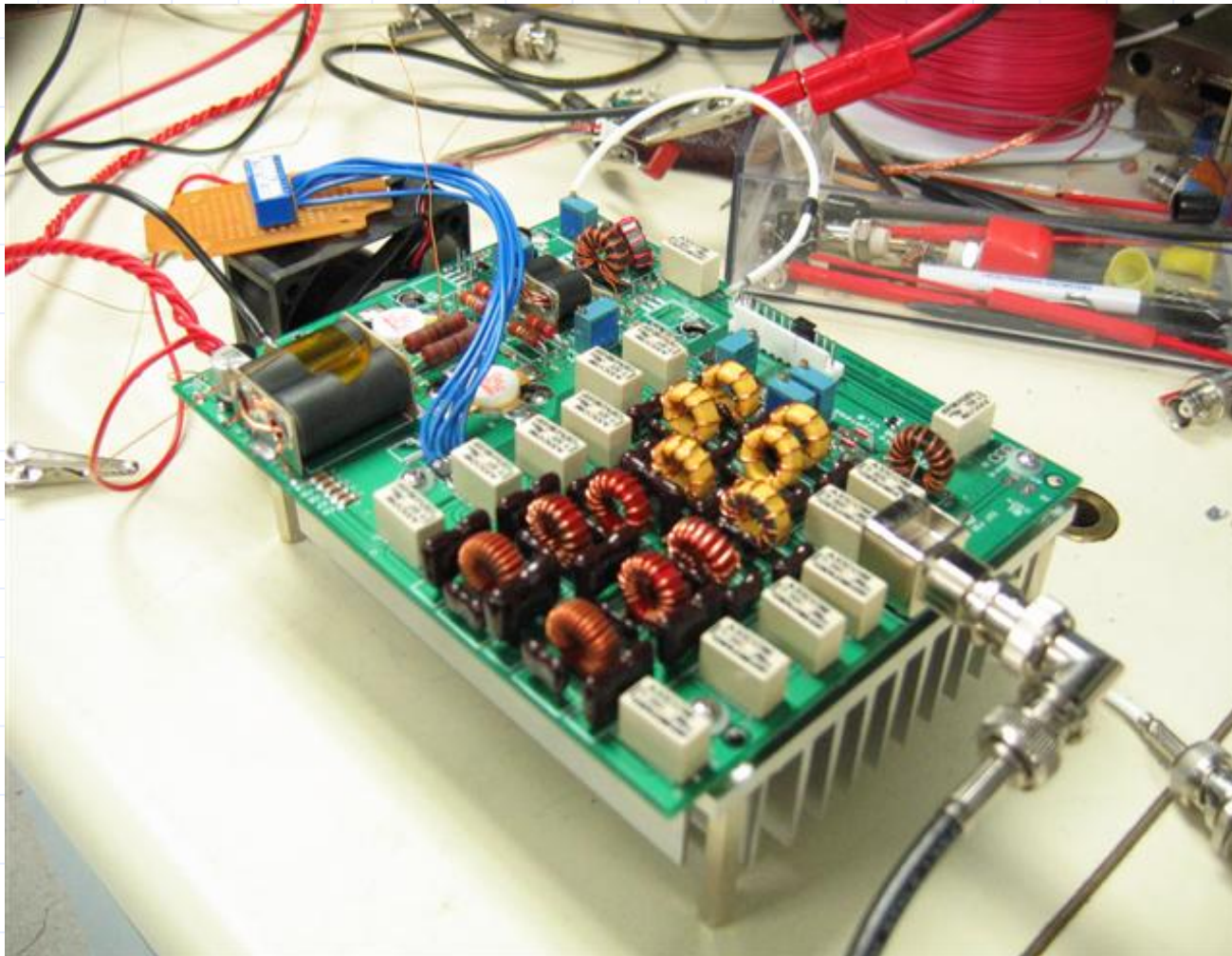
RFE – RF Expansion Board



RFE Board Features

- ◆ Low Noise Preamp – 3dB Receiver NF
- ◆ Nine 5th Order Ham Band Filters
- ◆ Spare Customer Configured Filter
- ◆ Control For XVTR, PA, ATU
- ◆ Impulse Generator for Equalization

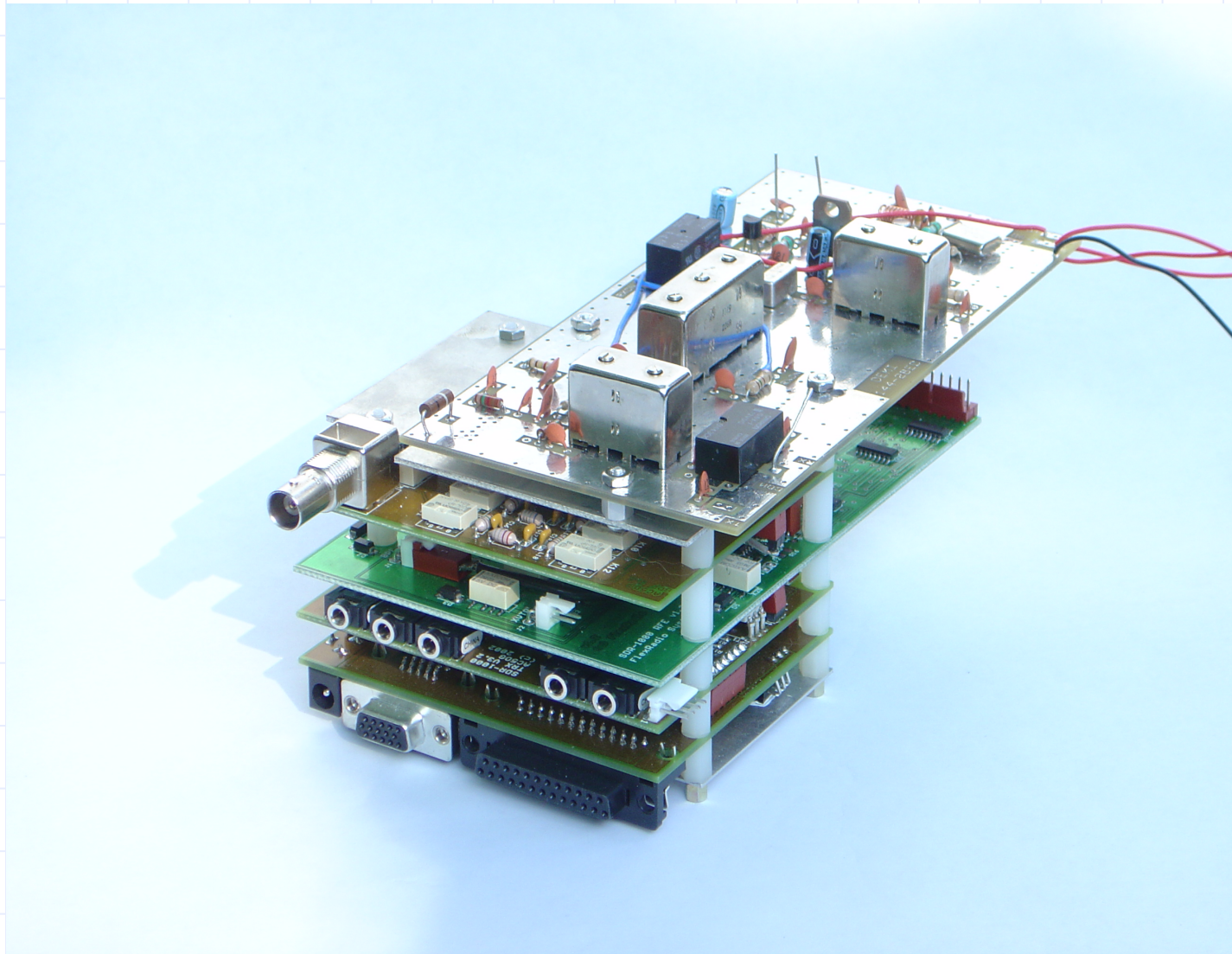
100W Linear Amplifier



100W Linear Specifications

- ◆ All HF Amateur Bands 160-10M
- ◆ 2SC2879 Finals
- ◆ Elliptical Low Pass Filters
- ◆ Digital FWD/REV/SWR Readout
- ◆ Interface for Internal ATU

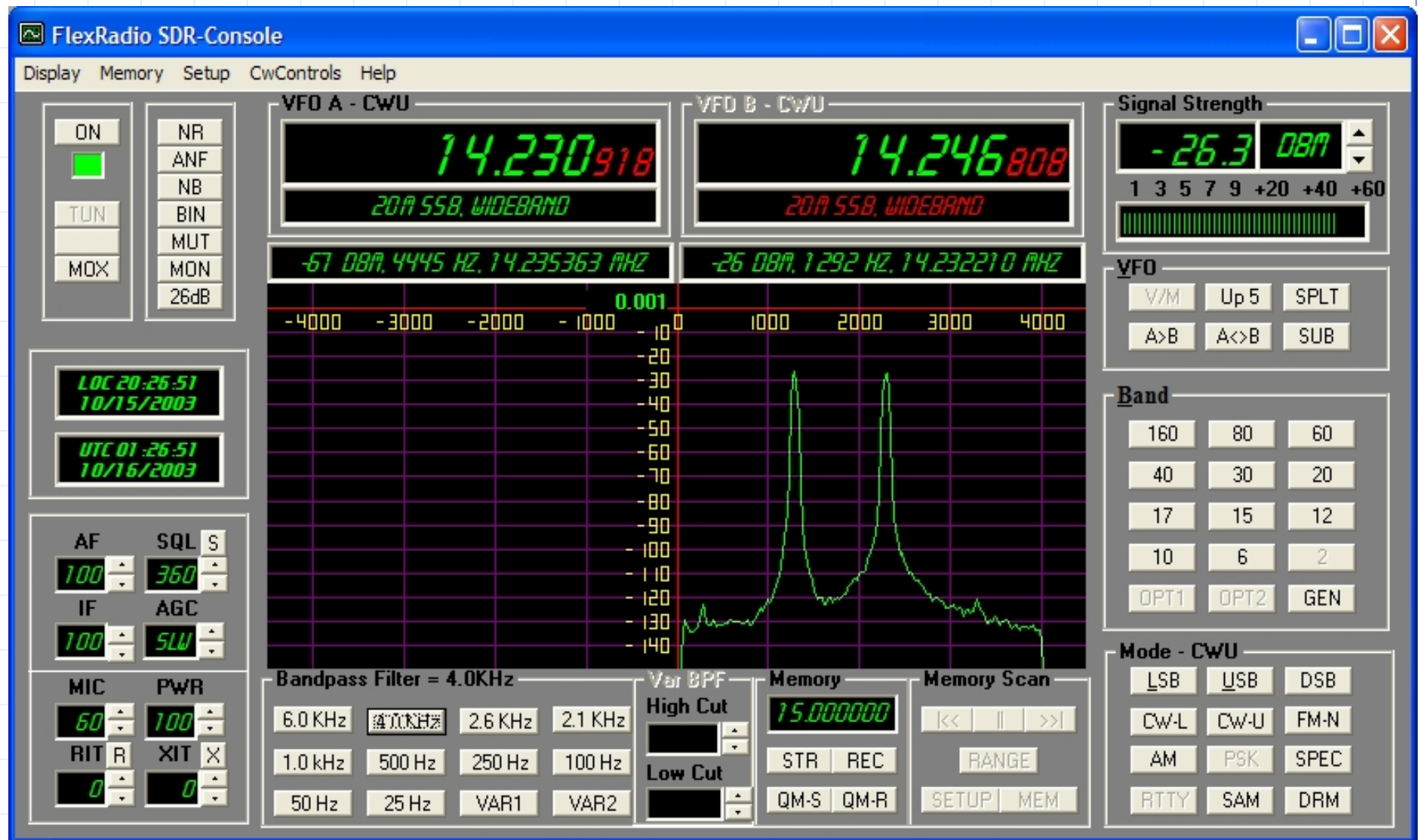
DEMI 2M Transverter IF



DEMI Transverter IF Features

- ◆ 144MHz – 146MHz IF
- ◆ Unity Gain Receive
- ◆ 50-100mW Nominal Output Power
- ◆ Three Chamber Helical Filter
- ◆ Separate or Common TX/RX

Two Tone IMDR- >90dB, 5KHz Spacing!



Coming SDR-1000 Enhancements

- ◆ Automatic Antenna Tuning Unit
- ◆ Automatic Impulse Response Equalization
- ◆ USB Radio Control
- ◆ Pro Audio Card Support
- ◆ Integrated PSK31, RTTY
- ◆ 3rd Party Digital Mode Support
- ◆ Virtual Serial Port for Logging
- ◆ Multi Radio Support
- ◆ Remote Operation

Questions? Q & A Time

Gerald Youngblood, AC50G